

Claim 85 recites, inter alia, a reduction projection catadioptric optical system devoid of reflective surfaces that bend an optical axis, i.e., devoid of a folding mirror.

Williamson discloses an optical system that is devoid of a folding mirror, more particularly, a uni-axis optical system. Takahashi, on the other hand, discloses an optical system with two folding mirrors M_1 , M_2 for bending the optical axis, i.e., a multi-axis optical system.

Uni-axis optical systems and multi-axis optical systems are quite different from each other, and even persons skilled in the art cannot combine those different optical systems. Nor is there any motivation for combining them.

Claim 85 further recites that the reduction projection catadioptric optical system comprises an aperture diaphragm on an image side of a most image-wise curved mirror.

The rejection alleges that it would have been obvious to include Takahashi's aperture stop in Williamson's device in order to limit the amount of light being imaged.

It should be noted, however, that in the Williamson device there are only two positions at which it is possible to dispose an aperture stop. One is a position

on the optical path in the neighborhood of mirror M_2'' .

The other is a position on the optical path in between the "mirror M_5'' " and M_6'' . An aperture stop can only be disposed in the neighborhood of a position in which the principal light ray and the optical axis cross one another, so only the two positions just referred to are suitable.

Williamson excludes disposing an aperture stop on an image side of a most image-wise curved mirror, and it is not possible to modify Williamson in view of Takahashi to provide the optical system recited in claim 85.

Finally, if in Williamson a stop were disposed on an image side of a most image-wise curved mirror (M_5''), i.e., at a position between the mirror M_5'' and the image plane 22, such a stop would function as a field stop rather than as the aperture diaphragm recited in claim 85.

For the foregoing reasons, claim 85 and the claims dependent thereon should be allowed.

This application is believed to be clearly in condition for allowance.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this

paper and has not been requested separately, such extension is hereby requested.

Respectfully submitted,

NHS:dmt

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